INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
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Toll Free (800) 451-6027
www.idem.IN.gov

February 7, 2013

Mr. David Jeffers
Roberts Environmental Services, LLC
2112 Carmen Court
Goshen, IN 46526

Dear Mr. Jeffers:

Re: Lane Street Groundwater
Contamination Site, Elkhart, Indiana

The Indiana Department of Environmental Management (IDEM) has received and reviewed your letter and the attached supporting materials dated December 20, 2012, regarding comments that IDEM transmitted to Ms. Leslie Blake of the U.S. Environmental Protection Agency (EPA) on November 30, 2012, concerning our review of environmental investigation information associated with the Lane Street Groundwater Contamination Superfund site. We appreciate the detail with which you explained your understanding of site conditions and interpretation of the data results which Roberts Environmental collected between March 2011 and October 2012. We have not prepared a point by point response to the specific issues raised in your letter submittal, but rather have taken your comments, explanations and understanding of site conditions presented in the letter into account to revise our original comments regarding the site-related data, as they were expressed in our November 30th letter to the EPA. In addition, IDEM has reviewed and taken into consideration the groundwater data recently available from the first phase of the Remedial Investigation (RI) site sampling activities conducted by SulTRAC for EPA. Attached to this letter for your reference is a copy of our February 7, 2013, letter to Ms. Blake which presents IDEM's revised comments on the site investigation data.

As we have expressed to you before, the substantial amount of environmental data gathered from your site investigation work within the Lane Street Groundwater Contamination study area has certainly been beneficial to IDEM and EPA in helping to characterize the groundwater contaminant plume at the site. We hope for future access to the monitoring wells that you have installed through your investigation efforts at the site, as we believe it will be important to monitor site groundwater quality over time to observe, evaluate, and confirm, among other things, if the groundwater contaminant plume is exhibiting "slug" release characteristics as proposed in your letter.

Thank you again for your letter submittal and for sharing the results of your sampling efforts. If you have any questions regarding our revised comments, please do not hesitate to contact me at (317) 234-7179.

Sincerely,

Douglas Petroff

Douglas Petroff, Project Manager
Federal Programs Section
Office of Land Quality

DP:bl
cc: Rex Osborn, IDEM

Attachment – February 7, 2013 IDEM letter to Ms. Leslie Blake (EPA)

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February 7, 2013

Ms. Leslie Blake
U.S. EPA, Region V
77 West Jackson Blvd.
Chicago, IL 60604-3507
Mail Code: SRF-6J

Dear Ms. Blake:

Re: Site Investigation Data Related to
the Lane Street Groundwater
Contamination Site, Elkhart, Indiana

This correspondence is a follow-up to the November 30, 2012, letter sent to you summarizing Indiana Department of Environmental Management (IDEM) staff's comments related to the environmental investigation information associated with the Lane Street Groundwater Contamination Superfund site that was recently provided by Barnes & Thornburg LLP. That information was based on data collected from multiple sampling events conducted between March 2011 and October 2012 by Roberts Environmental (Roberts).

As you know, following the issuance of the November 30th letter, U.S. Environmental Protection Agency (EPA), IDEM, and Roberts personnel participated in a conference call on December 5, 2012, to discuss the letter. In addition, Roberts submitted a letter to IDEM on December 20, 2012, that was critical of several of the points presented in our November 30th letter and presented their understanding of a site conceptual model of contaminant transport for the Lane Street Groundwater Contamination Site. Based on this new information and these discussions, we felt it appropriate to correct and/or clarify each of the four comments presented in our November 30th letter to you.

More specifically, it was noted during the call and pointed out in Roberts' December 20th letter that the groundwater data IDEM referenced in the first comment of the November 30th letter was older and of a lesser quality than other available data. Though not changing the main point of the comment (i.e., that IDEM agrees that a contaminant source located north of Cooper Drive appears to be contributing to the Lane Street groundwater contamination), referencing the more relevant data values does result in changes to the wording of the first comment as well as to the second comment presented in the letter. In addition, we felt it appropriate to modify the third comment regarding speculative points regarding a possible source of contamination at the 2503 Marina Drive property, and also appropriate to modify the fourth comment to add to the discussion

related to the trichloroethylene (TCE) concentrations detected in monitoring wells MW-10 and MW-14 located at the 2503 Marina Drive property. Below, IDEM offers revised comments from our November 30th letter for your consideration:

- Chlorinated Volatile Organic Compounds (VOCs) contamination was identified in groundwater along the north side of Cooper Drive, including perchloroethylene (PCE) (at concentrations as high as 59 µg/L) and TCE (as high as 34 µg/L). The groundwater contamination north of Cooper Drive is generally shallow in depth (less than 14 feet below the ground surface (bgs)). Additional investigation south of Cooper Drive identified TCE groundwater contamination in the 22-26 feet bgs depth interval, which may suggest that groundwater contamination is generally sinking as it migrates downgradient. The Roberts investigation has shown that the groundwater contamination north of Cooper Drive is likely related to the groundwater contamination identified at the southwestern corner of the 2503 Marina Drive (former Dygert facility) property and in the former drinking water wells located along Lane Street.

- The Roberts investigation has indicated that the groundwater contamination identified at Lane Street is from a source area located north of Cooper Drive, perhaps located on the 2601 Marina Drive property. IDEM agrees that a contaminant source located north of Cooper Drive appears to be contributing to the Lane Street groundwater contamination. It is noted that in order for a source area north of Cooper Drive to be the sole source of groundwater contamination observed at the 2503 Marina Drive property, it would have been necessary for the center of mass of the contaminant plume to have migrated at least 1,000 feet from the source area. While this type of migration is possible and has been observed at other chlorinated VOC releases, it is IDEM staff's opinion that this theory cannot be conclusively proven or disproven based on the information provided to date by Roberts. Analysis of groundwater flow and contaminant behavior over time involves collecting site specific hydrogeologic parameters, understanding the release mechanisms and magnitudes of all sources, and observing trends from multiple sampling events. In our opinion, it would also be helpful to see calculations that this type of migration is possible at the site within the framework of these site specific parameters and the historical timeframes of a potential release.

- Extensive soil sampling (288 samples) from 94 soil borings located near the southwestern corner of the 2503 Marina Drive property showed no chlorinated VOC contamination in the upper 4 feet of soil. This is good evidence that significant surface contaminant spills did not occur in this area in the past. IDEM would like to see evaluated in the future the possibility of the current or former existence of preferential pathways (such as floor drains or dry wells) at this and other buildings located over the contaminated groundwater plume associated with the Lane Street Groundwater Contamination Site to investigate this as a possible contaminant migration pathway.

- Monitoring well MW-14, located on the southwestern corner of the 2503 Marina Drive property, contained TCE groundwater contamination at a concentration of 190 µg/L. Monitoring well MW-10, located immediately north (i.e., upgradient) of this area, did not contain detectable levels of groundwater contamination at that depth interval, which considered by itself might suggest a shallower source of contamination located on the southwestern portion of that property. However, in light of the extensive soil sampling conducted on this portion of the property, a contaminant source in this area seems unlikely. A possible alternative explanation for this result is that groundwater contamination originating off-site is moving largely horizontally by zonal flow through a coarse sand and gravel unit which is encountered generally at a depth of 13 to 16 feet bgs beneath the 2503 Marina Drive property, and that this impacted aquifer is encountered at differing depths bgs at the locations of MW-10 and MW-14. This alternative explanation is generally the theory proposed by Roberts in their December 20th letter. While IDEM agrees that this theory is possible, we would like to see additional information collected/presented in the future to confirm it. For example, based on the soil boring logs provided by Roberts, the site stratigraphy is not as simplified as presented in their conceptual site model and the geologic cross sections, with zones of varying permeability within "shallow" and "intermediate" groundwater units. This classification of the units appears to be based on generalized soil descriptions in the field rather than depositional distributions confirmed with laboratory grain size analysis. Documentation of the presence and nature of cross bedding and unit contacts would be necessary to help support this theory. Roberts stated in their December 20th letter that "horizontal flow within this intermediate aquifer zone is much greater than vertical flow to underlying zones." This should be supported/confirmed with a comparison of hydrologic testing results from each of the flow zones. Potentiometric head data from the nearby Geocel site (Voluntary Remediation Program Site number 6070601) show that vertical gradients (both upward and downward) are present within the aquifer. Furthermore, this theory requires there to be no mixing of groundwater between the "shallow" fine/medium sand unit and the "intermediate" sand/gravel unit. To date, IDEM has not seen site-specific hydraulic conductivity data demonstrating that there is sufficient contrast in conductivities between these units for this to occur at the site.

Thank you for the opportunity to provide you with these comments. If you have any questions regarding the comments, please do not hesitate to contact me at (317) 234-7179.

Sincerely,

Douglas Petroff

Douglas Petroff, Project Manager
Federal Programs Section
Office of Land Quality

DP:bl
cc: Rex Osborn, IDEM